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ABSTRACT

A followup of the original results of a curriculum unit, "Planning Ahead for the World of Work", for high school women was conducted one year after the unit was tested. The followup included 247 of the 326 home economics students who participated in the original study. The conclusions concerning the retained effect of the unit were: (1) some of the gain in the experimental group on knowledge of the world of work was retained, but experimental and control group responses were not significantly different; (2) the experimental group retained higher scores on the Challenge attitude scale; (3) the control group gained a desire for economic mobility and extrinsic rewards in the 12th grade equal to that held by the experimental group; and (4) the status level of students' stated first occupational choices tended to remain the same. Recommendations for further use of the curriculum unit are discussed. The authors found that the optimal use of the unit appears to be at the ninth grade level. (Author/PC)

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Research and Development Series No. 102

WOMEN IN THE WORK FORCE:
FOLLOW-UP STUDY OF CURRICULUM MATERIALS

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
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- Generating knowledge through research
- Developing educational programs and products
- Evaluating individual program needs and outcomes
- Installing educational programs and products
- Operating information systems and services
- Conducting leadership development and training programs

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Foreword

Exploring career alternatives, making career choices, and developing essential competencies is a difficult, complex, lifelong process with which many people have only limited success. Yet, many people could avoid or reduce such difficulties by timely development of identifiable knowledge, skills, attitudes, and plans. The Center has undertaken, therefore, to develop methods, procedures, and tools for school personnel to use in developing programs to assist young people in effectively acquiring and applying the capabilities they need to evolve satisfying careers.

This report on one project in the larger effort describes the follow-up study of a curriculum unit, "Planning Ahead for the World of Work," designed to aid secondary school girls in making career plan consistent with their interests and capabilities and with the realities of the world of work. The findings of this follow-up study, the findings of the original development and testing of the unit, and the unit itself should be of interest to teachers and counselors of girls as well as to researchers and to educational planners developing curricula and guidance experiences for these students.

We should like to acknowledge the cooperation and assistance of the students, faculty, and staff from the five school systems that participated in the field testing and follow-up study of the unit and that of Dr. Mary B. Kievit, Rutgers University, and Dr. Mary Faith Tanney, University of Maryland, for their review of the manuscript. Special recognition is due Louise Vetter, Alice J. Brown, and Barbara J. Sethney who conducted the project and prepared the report.

Robert E. Taylor
Director
The Center for Vocational Education

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Summary

Increasing numbers of women are entering and reentering the work force. Their reasons for working and the extent of their preparation for it are under serious study. Few studies however, relate to identified student needs and understandings. Career planning for young women must now be stressed. Recent federal legislation intensifies the need for increased career planning for young women.

A follow-up of the original results of a curriculum unit, "Planning Ahead for the World of Work," for high school women was conducted one year after the unit was tested. The follow-up included 247 of the original 326 home economics students who participated in the study. At the time of the retest, students were in the eighth, tenth, and twelfth grades. The conclusions concerning the retained effect of the unit were:

1. Some of the gain in the experimental group students' objective knowledge of the world of work was retained, but experimental and control group responses were not significantly different.

2.a. Students in the experimental group still had significantly higher scores on the Challenge attitude scale than the students in the control group.

b. Other student attitude response choices changed in that the control group gained a desire for economic mobility and extrinsic rewards in the twelfth grade equal to that held by the experimental group. Age and maturity may have been responsible for these changes.

3. The status level of students' stated first occupational choices tended to remain the same, while more students in the experimental group than in the control group felt they would continue to work after their children were born and also after their children were in high school.

Recommendations for use of the unit are:

1. Optimal use of the unit appears to be at the ninth grade level. If used at all three grade levels,

seventh graders would need supplementary occupational information, and eleventh graders would need more information on women's work roles.

2. Teachers and guidance personnel can help extend the impact of the unit by updating the materials when needed and by providing additional career exploration and development activities for the students.

3. School counselors may wish to use the unit in group guidance classes.

4. Revision of the unit would allow for inclusion of boys in the learning experience.

5. It would be well to include parents, showing respect for past, present, and future attitudes.

6. This unit could be assimilated into an ongoing career education program.

7. More counseling information for career orientation of girls is now available and should be utilized.

At the time of retest, 20 percent of the original group were not available for testing; therefore, as further loss would seriously endanger test validity, no additional follow-up is planned.

Introduction

The Problem

Both boys and girls can expect to be employed at some time during their lives. True. Both boys and girls are equally prepared for their future occupations. False. Perhaps in the near future, the latter statement will also be true. Presently, however, many changes need to be made to balance the scales.

Girls need encouragement and assistance to properly prepare for the myriad of jobs becoming available to them. The federal government is helping. Executive Order 11246, as amended, requires most federal contractors to have an affirmative action program to encourage the hiring and promotion of women in jobs where they are presently underrepresented. Public law 92-318 will help girls and young women as they prepare for jobs. The law specifies:

> no persons shall on the basis of sex be excluded from participation in, denied benefits of, or be subjected to discrimination under any educational program or activity receiving Federal financial assistance...(U.S. Congress, 1972:138).

Publicity surrounding states' ratification of the proposed Twenty-seventh Amendment to the Constitution (the Equal Rights Amendment) is also bringing attention to the need for opening new employment opportunities to women.

Schools, particularly high schools, have the major responsibility for career guidance of girls. New materials for students must be made available to counselors and teachers. The curriculum unit, "Planning Ahead for the World of Work," and the related study and follow-up were designed to help meet the need for such materials.

Objectives of the Follow-up Study

The study of career development is a priority area of The Center for Vocational Education (CVE). In 1968, materials were prepared for a curriculum unit, "Planning Ahead for the World of Work," directed toward female secondary school students. The goal of the unit was to bring about changes

in secondary school girls' knowledge of, attitudes toward, and plans for, the world of work.

The objectives of the unit, stated in terms of changes sought in students' behavior, were as follows:

1. Students will have more knowledge about women in the work force as exhibited by more correct answers to objective information items on a post-test than on a pretest.

2. Students will show, by responses to attitude items, more acceptance of the working role in their lives.

3. Students will list different alternatives for choices of their occupations.

4. More students will indicate plans for the future which show work force participation at some time in their lives.

5. More students will indicate that they have considered work life expectancy projections for the total life span.

The unit was designed to provide factual resource material on occupational opportunities past, present, and future. Unit activities called for informational, attitudinal, and career planning responses.

A research study conducted in 1969 sought to determine whether the objectives of the curriculum unit had been met. The results of this study were published in Women in the Work Force: Development and Field Testing of Curriculum Materials (Vetter and Sethney, 1972).

A follow-up study one year later was deemed necessary in order to determine the retention level of content, attitude responses, and career plan responses covered in the original study.

The one-year follow-up was conducted during 1970 with the same girls then in grades eight, ten, and twelve to evaluate the longer-term effects of the curriculum unit and to determine the feasibility of studying the career development of this group of students over a period of years.

Specific objectives of the follow-up study were to:

1. Determine whether students' objective knowledge

of the world of work had been retained over a period of one year.

2. Determine whether students' attitude responses had remained constant over the period of a year (and, if changed, in which direction).

3. Determine whether students' stated future plans had remained constant over the period of a year (and, if changed, in what ways).

Methods and Procedures

This section includes a discussion of the evaluation instrument and a description of the original testing and the follow-up testing of the curriculum unit.

Evaluation Instrument

The instrument used for follow-up was identical to that used in the original study. It included sections relating to knowledge of work, attitudes toward work, and career plans. Refer to Appendix A for a copy of the instrument.

Knowledge of Work

The knowledge of work section included 40 multiple choice item (Appendix A, Part Two). Of the items, 25 offered four choices, 15 offered two. Only one response per item was considered to be the correct choice. Items were scored pass (1) or fail (0), allowing a possible score range from zero to 40.

Attitudes Toward Work

The 40 attitude items included the instrument (Appendix A, Part One) were developed in an earlier study (Vetter, 1969). For each of the 40 items, the respondent was to indicate the extent of her agreement on a Likert-type scale (strongly diagree, disagree, indifferent or don't know, agree, strongly agree). Within the 40 attitude items, there were five scales (Economic Mobility, Role Security, Intrinsic Reward, Challenge, Extrinsic Reward) of eight items each. Scores for each subject were summed over the appropriate eight items to obtain each scale score. Thus, a subject's score on any of the five scales could range from eight (strongly disagree with all items) to 40 (strongly agree with all items).

The Economic Mobility scale referred to those circumstances under which girls felt they would work after marriage. It included items relating to basic necessities (items 6, 11, 16, 26) and those relating to upward mobility (items 1, 21, 31, 36). High scores on this scale indicate a contemporary approach to employment with strong approval of work after marriage.

The Role Security scale included items relating to role identification (items 2, 7, 12, 37), relationship to family (item 32), men (items 22, 27), and work (item 17). Strong agreement, high scores, indicate the traditional position -- woman's place is in the home.

Items included on the Intrinsic Reward scale pertained to working with others (items 3, 23, 33), helping others (items 8, 13, 18), and being of use to society (items 28, 38). High scores on this scale indicate strong agreement with those statements related to helping people.

The Challenge scale contained itmes about opportunities (items 4, 9, 14, 39), running one's own life (item 34), and making one's decisions (items 19, 24, 29). Strong agreement with these items suggests a positive response to statements about independence and creativity.

The items on the Extrinsic Reward scale related to attitudes toward salary (items 30, 40), promotion (items 5, 15), and benefits (items 10, 20, 25, 35). High scores on this scale reflect positive responses toward salary, promotion, and benefits.

Future Plans

Items in this section (see Appendix A, Part Three) covered the areas of education, employment, and marriage and family plans. Fourteen of the items were in the yes-no response category. There were 15 additional pretest varied response items and nine additional post-test and retest items.

Field Tests - Original and Follow-up

Sample

The sample was selected from public secondary schools in Ohio and Tennessee. Students from both metropolitan and nonmetropolitan locations were included. Also, it was felt necessary that the total range of ability levels be inlcuded in the sample from each location. The original field test was planned within these limits and a number of other constraining factors (e.g., the willingness of school administrators to allow participation of their schools, the willingness of teachers to participate, and the kinds of student groups available).

Three school districts were selected to particpate in the field testing, one metropolitan and two nonmetropolitan. The metropolitan community had a population of 260,000. One of the nonmetropolitan communities had a population of 19,000, the other was a rural community.

In the metropolitan community, the city supervisor of home economics aided in the selection of four racially integrated urban schools (as opposed to inner-city or suburban) with the entire range of socioeconomic status represented. One of the nonmetropolitan communities was served by one racially integrated high school, with four feeder junior high schools. One of the junior high schools, which was integrated and represented the entire range of socioeconomic status, was selected. The other community has an all-Caucasian student population served by a rural, consolidated school. Thus, seven schools were represented in the field testing.

In each of the participating schools, administrative considerations necessitated the use of regularly consituted home economics classes, although it is felt that the unit is appropriate for all secondary girls. As the follow-up study was one year later, the original sample of seventh, ninth, and eleventh grade students were then in grades eight, ten, and twelve.

After testing the community-size variable for effects on pretest scores, it was concluded that no distinction in this area was necessary. The data from the original field test and the follow-up were, therefore, analyzed for the numbers of students shown in Table 1.

Table 1

Number of Students in Participating Classes

	Original Study		Follow-up	
Grade Level	Experimental	Control	Experimental	Control
Seventh	87	35	71	29
Ninth	93	60	72	49
Eleventh	31	20	19	7
Total	211	115	162	85

Procedures

Project staff collected data for the follow-up re-rest in March and April 1970, using a standard administration procedure. The retest occurred one year after administration of the pretest. For the experimental groups, the pretest had immediately preceded the curriculum unit with the post-test following completion approximately two weeks later. For control groups, the pre-and post-test administrations were at two-week intervals.

Analysis

Knowledge of Work Attitude, Scales, Planning Items. The effects of grade level and of experimental versus control group membership were analyzed for pretest, post-test and retest scores using a two-way analysis of variance which allows for unequal frequencies (Winer, 1971). An analysis of variance of the preptest scores of students participating in the pretest, post-test and retest revealed no significant difference.

Reliability Estimation. Two reliability estimates were obtained. Reliability was estimated for knowledge of work and for each attitude scale by the test-retest correlations of the control groups over an interval of two weeks. Internal consistency reliability estimates (Kuder-Richardson Formula 8) were made by reanalyzing the scales developed by Lee, Ray, Vetter, Murphy, and Sethney (1971), using the shortened forms developed for this study.

Reliability estimates for the knowledge of work test and the five attitude scales revealed a reliability range from .49 to .71. The internal consistency estimates for the attitude scales were higher than that of the knowledge of work test, most porbably because several dimensions were present in the latter test while each of the attitude scales were developed as a single factor. The pretest - post-test correlations, based on the responses of the control group, may have been lowered by effects of the pretest if it stimulated some girls to consider plans for adult life, even though these students' did not participate in the unit.

Results

Results of the follow-up study are presented in this section. Discussion will focus on follow-up results and how they relate to the original study.

The means and standard deviations for each of the scales are presented in Table 2. Table 3 presents a summary of pretest and post-test analysis of variance results for the original group of 326 students, and a summary of the retest group results for the remaining 241 students. The analyses of variance tables for the two groups are available in Appendix B. The results will be discussed with reference to the unit objectives in order to parallel the original report (Vetter & Sethney, 1972).

Objective 1. Determine whether students' objective knowledge of the world of work had been retained over a period of one year.

In the original study, substantial gains in knowledge of work post-test scores were noted in the experimental group for each grade level. The control group remained at its original level. The significant difference between scores gained in the post-test was lost in the retest; however, there was some difference and it is positive. This result was to be expected as learning curves tend to level out over time. Eighth graders in the experimental group retained a gain of three points from the pretest through retest; tenth graders, two points; and twelfth graders maintained a three-point gain.

The significant difference by grade level maintained through the pre- and post-test were also lost. During the year following the pretest, those originally in the seventh grade had gained enough information about the world of work to eliminate any significant difference between grade levels. It is possible that prior to the eighth grade, students are not ready to assimilate such information or that such information is not provided.

Objective 2. Determine whether students' attitude response choices had remained constant over the period of a year (or if changed, in what directions).

Table 2

Means and Standard Deviations for Pretest, Post-test, and Retest Scores

Scale		7th (8th) *Grade Experimental (N = 71)		7th (8th) *Grade Control (N = 29)		9th (10th) *Grade Experimental (N = 72)		9th (10th) *Grade Control (N = 49)		11th (12th) *Grade Experimental (N = 19)		11th (12th) *Grade Control (N = 7)	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Knowledge of World of Work	PR**	20.66	4.13	21.21	2.94	22.03	3.57	21.73	2.89	22.32	2.73	21.57	3.51
	PT	27.34	6.11	21.00	2.70	29.60	7.08	23.02	3.35	27.53	2.70	23.14	2.67
	RE	23.80	4.90	22.66	3.13	24.04	4.23	23.29	3.14	25.89	3.97	23.86	4.30
Economic Mobility	PR	30.90	4.97	29.10	5.41	29.89	4.89	31.33	3.79	32.53	3.37	29.71	6.40
	PT	31.61	4.41	29.65	5.14	31.06	5.23	30.83	4.72	32.79	3.19	26.86	5.93
	RE	31.14	5.16	30.03	5.25	31.65	5.69	31.27	4.62	32.84	3.93	30.29	4.54
Role Security	PR	19.44	5.00	20.21	4.19	19.43	4.43	21.41	4.13	18.26	3.72	20.00	4.58
	PT	18.76	4.54	19.69	4.56	19.46	5.34	21.20	4.68	20.68	5.26	21.57	2.88
	RE	18.34	4.67	18.66	3.92	19.58	5.53	19.71	4.83	17.79	5.24	20.71	4.61
Intrinsic Reward	PR	31.96	3.49	31.86	4.96	32.15	3.26	32.88	3.09	34.53	2.95	32.71	4.42
	PT	31.73	3.64	32.03	4.11	32.53	3.67	32.37	3.47	35.11	3.25	31.57	3.26
	RE	32.90	4.36	33.21	4.18	32.06	4.86	32.78	3.95	34.95	3.22	31.14	3.24
Challenge	PR	27.49	3.76	26.55	4.24	26.82	3.45	27.33	4.34	28.53	4.99	27.14	3.39
	PT	27.70	4.55	26.97	2.90	28.49	4.14	27.20	4.26	28.58	5.82	26.29	3.68
	RE	27.85	4.06	27.21	4.14	27.07	4.42	26.86	4.32	27.68	4.98	23.86	4.34
Extrinsic Reward	PR	27.38	4.07	25.93	3.83	27.36	3.49	27.29	4.25	26.68	5.53	26.43	3.10
	PT	27.89	4.35	26.93	3.78	29.00	3.85	27.59	4.52	27.47	5.66	28.86	3.18
	RE	27.34	3.85	25.17	4.89	28.04	4.63	27.39	4.93	27.42	4.13	30.00	2.16
First Occupational Choice (98)***	PR	3.28	1.61	3.00	1.58	3.58	1.63	3.22	1.53	3.05	1.72	3.57	1.99
	PT	3.23	1.49	2.52	1.35	3.74	1.49	3.55	1.49	2.68	1.38	4.29	1.25
	RE	3.17	1.53	3.07	1.31	3.33	1.77	3.71	1.44	4.16	1.17	4.86	0.90
Never Plan to Work (83)	PR	0.07	0.26	0.03	0.19	0.14	0.35	0.02	0.14	0.00	0.00	0.00	0.00
	PT	0.13	0.34	0.03	0.19	1.10	0.30	0.04	0.20	0.00	0.00	0.00	0.00
	RE	0.06	0.23	0.00	0.00	0.06	0.23	0.04	0.20	0.00	0.00	0.00	0.00

* At time of retest, students were in grades 8, 10, and 12 respectively.

** PR = Pretest PT = Post-test RE = Retest

*** Item numbers (Appendix A) given in parentheses.

Table 2 (cont.)

Scale		7th (8th) *Grade				9th (10th) *Grade				11th (12th) *Grade			
		Experimental (N = 71)		Control (N = 29)		Experimental (N = 72)		Control (N = 49)		Experimental (N = 19)		Control (N = 7)	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Work After High School (82)	PR	0.62	0.49	0.62	0.49	0.65	0.48	0.76	0.43	0.63	0.50	0.71	0.49
	PT	0.59	0.50	0.66	0.48	0.72	0.45	0.76	0.43	0.58	0.51	0.71	0.49
	RE	0.54	0.50	0.62	0.49	0.79	0.41	0.80	0.41	0.89	0.32	0.86	0.38
Work After College (86)	PR	0.68	0.47	0.72	0.45	0.62	0.49	0.69	0.47	0.47	0.51	0.43	0.53
	PT	0.69	0.47	0.76	0.44	0.64	0.48	0.63	0.49	0.63	0.50	0.14	0.38
	RE	0.72	0.45	0.76	0.43	0.81	0.46	0.65	0.48	0.58	0.51	0.57	0.53
Quit Work When Marrying (87)	PR	0.18	0.39	0.24	0.44	0.18	0.39	0.12	0.33	0.00	0.00	0.29	0.49
	PT	0.14	0.35	0.21	0.41	0.17	0.38	0.24	0.43	0.11	0.32	0.43	0.53
	RE	0.11	0.32	0.07	0.26	0.12	0.33	0.10	0.31	0.05	0.23	0.00	0.00
Work After Marriage Until Child (88)	PR	0.54	0.50	0.59	0.50	0.60	0.49	0.74	0.45	0.79	0.42	0.86	0.38
	PT	0.76	0.43	0.66	0.48	0.71	0.46	0.59	0.50	0.89	0.32	0.57	0.53
	RE	0.65	0.48	0.79	0.41	0.60	0.49	0.67	0.47	1.00	0.00	0.36	0.38
Return to Work Right After Child (89)	PR	0.25	0.44	0.10	0.31	0.12	0.33	0.14	0.35	0.21	0.42	0.00	0.00
	PT	0.21	0.41	0.10	0.31	0.21	0.41	0.22	0.42	0.11	0.32	0.00	0.00
	RE	0.24	0.43	0.10	0.31	0.17	0.38	0.16	0.37	0.26	0.45	0.00	0.00
Work After Children Are in School (90)	PR	0.37	0.49	0.28	0.45	0.32	0.47	0.47	0.50	0.37	0.50	0.29	0.49
	PT	0.63	0.49	0.28	0.45	0.44	0.50	0.49	0.51	0.63	0.50	0.29	0.49
	RE	0.55	0.50	0.34	0.48	0.42	0.50	0.49	0.51	0.84	0.37	0.14	0.38
Work After Children Are in High School (91)	PR	0.31	0.47	0.45	0.51	0.33	0.47	0.47	0.50	0.53	0.51	0.43	0.53
	PT	0.59	0.50	0.62	0.49	0.58	0.50	0.61	0.49	0.79	0.42	0.43	0.53
	RE	0.59	0.50	0.62	0.49	0.53	0.50	0.63	0.49	0.95	0.23	0.14	0.38
Work After Children Are "Grown" (92)	PR	0.35	0.48	0.45	0.51	0.44	0.50	0.53	0.50	0.63	0.50	0.43	0.53
	PT	0.59	0.50	0.41	0.50	0.64	0.48	0.57	0.50	0.89	0.32	0.43	0.53
	RE	0.58	0.50	0.48	0.51	0.54	0.50	0.55	0.54	0.89	0.32	0.43	0.53
Work Continuously (94)	PR	0.29	0.45	0.38	0.49	0.35	0.48	0.41	0.50	0.42	0.51	0.29	0.49
	PT	0.34	0.48	0.38	0.49	0.29	0.46	0.35	0.48	0.47	0.51	0.29	0.49
	RE	0.24	0.43	0.28	0.45	0.33	0.47	0.31	0.47	0.48	0.51	0.14	0.38

Table 3

Summary of Significant Pretest, Post-test, and Retest Analysis of Variance Results

Scale	Experimental vs. Control			Grade Level			Interaction		
	Pre N=326	Post N=326	Re N=247	Pre N=326	Post N=326	Re N=247	Pre N=326	Post N=326	Re N=247
Knowledge of Work		**		**	**				
Attitude Scales									
Economic Mobility		**							
Role Security				**	*				
Intrinsic Reward							*	*	
Challenge		**	*						
Extrinsic Reward						*			
Planning Items									
Choice of First Occupation (98)+					**	*		**	*
Never Work (83)									
Work After High School (82)						**			
Work After College (86)					*	**			
Stop Working At Marriage (87)									
Work After Marriage Until First Baby (88)					*	*			
Return to Work After Children Are Born (89)			*						
Work After Children Begin School (90)		**	**					*	
Work After Children Are in High School (91)			**						**
Work After Children Are Grown (92)		**	*						
Work Continuously (94)									

*p < .05 **p < .01 +Item numbers (Appendix A) given in parentheses.

In the retest, only one of the five attitude scales revealed a significant difference between the experimental and control groups. This occurred in the Challenge scale where a significant difference had also appeared in the post-test with the original complete group of students. The experimental group was more open to job opportunities and challenges. This suggests that the potential was there, but before participation in the unit, these students never realized that they, as girls, could feel that way. In the course of their study, these students were exposed to possible careers they could follow, and those that women actually do follow. Learning this in school served to add a stamp of approval to such careers. This experience was not available to the control group.

By grade-level comparison concerning the challenges of work, the mean scores of twelfth graders in the experiment held up, whereas, those of the control group fell considerably.

Douvan and Kay (Cook & Stone, 1973, p.42) studied girls between the ages of 11 and 18. Their nationwide study was concerned, in part, with adolescents' values and aspirations. Results indicated that the younger girls were more concerned with personal achievement and self-development, whereas, the older girls increased their interest in marriage and motherhood.

In a study of 1,237 girls and young women, Matthews and Tiedeman (1964) also noted that attitudes concerning career and marriage affect a girl's life style in various ways at varying developmental stages. They found a

> ...drop in career commitment from junior to senior high school (from 13 to 3 per cent) ... the high school group differed from the junior high group specifically in a greater acceptance of marriage... (p.383)

The twelfth grade control group retest appears to support both these studies. By exposing the experimental group to actual job possibilities, the usual loss of interest during this period was avoided.

The significant difference between experimental and control groups realized in the post-test for Economic Mobility was lost in the retest. The experimental group maintained only a slightly higher interest in economic mobility. At the twelfth-grade level, the control group considerably increased their interest in work after mar-

riage while the experimental group maintained their same degree of interest. This increase off-set the overall difference between groups. As twelfth graders are approaching the average age to marry (20.2 years), it is possible that all students were developing a concern for conditions under which they would work if married.

Retest scores for the twelfth grade showed that students in the control group had considerably increased their interest in extrinsic rewards while the experimental student group remained at the same level. This may indicate that interest in money increases with age independent of classroom instruction.

The significant difference revealed on the pre- and post-test between grade levels concerning Role Security was lost in the retest. It appears that for this one category, the loss of subjects did affect the results. The variation in responses was greatest at the twelfth grade level where there was also the largest subject loss.

In all other aspects, these findings a year later tend to support those found in the original study: Students participating in the curriculum unit

> ...showed more acceptance of the working role where it related to circumstances under which the respondent would work after marriage, such as working after marriage to have money to buy a home, and where it relates to the challenge of the working role, especially in relation to independence and creativity. Students did not change significantly their responses to items about the traditional role of women, nor their responses to the intrinsic ...reward of working (Vetter & Sethney, 1972, p.19).

Objective 3. Determine whether students' stated future plans had remained constant over the period of a year (or if changed, in what ways).

Students' first occupational choices (item 99) were categorized into seven status levels (one for professional to seven for unskilled labor) (Warner, 1960). Throughout the testing, no significant difference between experimental and control groups was reached. For the post-test a .01 significance level was noted by grade level. At the time of retest the difference was still significant at the .05 level. The major choice change appeared at the twelfth-grade level. This suggests a decline in expectations as students approach the actual

work situation. It may well be reality-based in terms of clerical opportunities being more abundant than others.

The interaction between the experimental and control groups remained significant in the retest. It is possible that the experimental group continued to maintain higher expectations than the control group. The curriculum unit could have interfered with the decrease of career expectation for tenth and twelfth graders.

Both experimental and control groups continued to feel the same way about whether they would work at all, work after high school, and work after college or other education (items 83, 82, 86). There were significant changes in students' outlook between grade levels. Both groups had much higher expectations to work after high school, from 58 percent to 88 percent at the twelfth grade level. This increase was probably a result of twelfth-grade students from both groups deciding not to further their education, either by college or other post-high school studies (retest item 96). These students did reveal an inconsistency in their answers regarding further education, as 58 percent had indicated that they would work after completing further education (item 86). Thus, the twelfth graders were still ambivalent about plans for additional education, or they may have theorized "if I were to further my education, I probably would/would not work."

Grade level continued to reflect changes in attitude of students to work after marriage until arrival of their first child (item 88). In the eighth and tenth grades respectively, 72 percent and 68 percent of the students felt they would continue to work until then, whereas 93 percent of the twelfth graders felt this way. The older students seemed to assume that this would be a natural progression of events.

Interestingly enough, there were considerable changes in the attitudes of participating students in the timing of work after children arrived (items 89, 90, 91, 92). Post-test responses indicated that the experimental group had earlier favored work after children had begun school and after children were grown. These times continued to be favored in the retest. In addition, twelfth graders in the experimental group increased their willingness to work after their children were born (item 89) enough to create a significant difference between the experimental and control groups (see Table 2). A significant difference

was also noted in item 91, interest in work after children had reached high school. It appears that the intervention of the unit helped the experimental group to gain interest as would be expected by the results of the control sample. Three-fourths of the twelfth-grade experimental group thought they would work when their children were in high school, whereas only 14 percent in the control group thought they would do so.

The difference between groups are more visible concerning work after children than the overall idea of work itself. This may result from the fact that almost all students, control and experimental, planned to work at some time in their lives. And, after exposure to the unit, more students decided they would work during various stages of child rearing than did those without such exposure.

The number of changes on the part of the experimental group in the post-test and retest concerning work after children arrive strongly suggests that the unit presented the possibility of work under these conditions. In most instances, this interest was most evident at the twelfth-grade level. This further suggests that at the eleventh- and twelfth-grade levels, students having exposure to such information are more open to the idea of a career or at least long-term work.

In the post-test, experimental students were asked if they had changed their occupational plans since participating in the curriculum unit (item 102). In responding, 43 percent of the students in the seventh grade, 30 percent in the ninth, and 48 percent in the eleventh grade said "yes."

One year leater, both experimental and control groups were asked about those changes (item 110). Overall, approximately 50 percent of both groups said they had changed occupational plans (experimental: 58 percent, eighth grade; 44 percent, tenth grade; 54 percent twelfth grade; control: 43 percent eighth grade; 57 percent tenth grade; and 53 percent twelfth grade). Students in these age groups tend to vary their occupational plans. For this particular sample, the unit did make an appreciable difference.

As for who may have influenced any changes in occupational planning (item 111), most students -- experimental and control -- indicated that friends (experimental, 14 percent; control, 13 percent) and other (experimental, 20 percent; control, 32 percent), mostly boyfriends, were most influential. Perhaps it is worth noting that students identified "boyfriends" separately from "friends."

Conclusions and Recommendations

Conclusions reached after comparing retest data with pre- and post-test data are discussed in terms of the objectives of the follow-up study. Recommendations for continued use of the curriculum unit and continuing research are also discussed.

Conclusions

Concerning changes students have made since the post-test in terms of meeting follow-up objectives:

1. Some of the gain in the experimental group students' objective knowledge of the world of work was retained, but experimental and control group responses were not significantly different.

2. a. Students in the experimental group still had significantly higher scores on the Challenge attitude scale than the students in the control group.

   b. Other student attitude response choices changed in that the control group gained a desire for economic mobility and extrinsic rewards in the twelfth grade equal to that held by the experimental group. Age and maturity may have been responsible for these changes.

3. The status level of students' stated first occupational choices tended to remain the same, while more students in the experimental group than in the control group felt they would continue to work after their children were born and also after their children were in high school.

There appears to be little material comparable to the "Planning Ahead for the World of Work" unit available to students and teachers. Yet, a need and desire for such material does exist. More than 4,000 requests for copies of the curriculum unit were filled by CVE. Also, some state supervisors reprinted the unit and distributed it to schools throughout

their states. An updated version of the unit, containing more recent information about the world of work, is available through CVE on a cost-recovery basis.

Recommendations

For the most part, the following recommendations support those offered at the conclusion of the original presentation of the curriculum unit.

1. The ninth-grade level appears to be the best time to offer this unit. These students are in the process of making educational decisions that seriously affect career decisions. Information such as that offered in the curriculum unit can assist students in their planning. As seventh graders are not quite to that decision stage, guidance material for them should emphasize occupational information. Introduction of such a unit at the tenth and eleventh grades would need to expand its focus to include concerns about the variety of roles of adult women.

2. Teachers and guidance personnel are encouraged to strengthen the impact of this brief unit by disseminating career information by way of bulletin boards, newspaper clippings, and class discussions with outside resource persons.

3. School counselors could help provide learning materials, maintain current career literature files, and participate in teaching the unit where appropriate. Schools having group guidance classes could utilize this unit to their advantage.

4. As boys must understand their future working roles with women co-workers and family roles with working wives, they could benefit from participation in the unit with slight revisions.

5. Parental involvement could help both parents and students to respect each other's outlook while gaining an understanding of how things were and how they are changing.

6. In accord with the widespread concern with career education, this unit could prove to be a useful addition to an existing career program.

7. Counseling materials are now available to assist both counselors and teachers better understand career orientation for girls. Such publications include: *Counseling Women* (Cook & Stone, 1973), *Girls and Women over the Life Span* (Matthews, Feingold, Weary, Berry, & Tyler, 1972), "We are Furious (Female) but We Can Shape Our Own Development" (Hansen, 1972), "A Framework for Counseling Women" (Schlossberg, 1972), and *Expanding Opportunities for Girls: Their Special Counseling Needs* (US Department of Labor, 1970).

Appendix A

PLANNING AHEAD

FOR

THE WORLD OF WORK

How do you feel about work? What do you know about working? What are your plans for employment? We are asking you to answer a number of questions which will be helpful to you and to the people who help students make decisions about work.

The questionnaire is divided into three sections. You will be marking your answers on the separate answer sheet. Use the special pencils provided. Notice that the answer spaces are in groups of five. After answering the first five questions, go to the top of the second column to find the space to mark your answer to question six. Be sure you mark the answer for each question in the spaces provided for it.

PART ONE

DIRECTIONS:

For the following statements, decide on the degree to which you agree or disagree with each statement and then mark that answer on the separate answer sheet. This should be how you personally feel about the statement, not how you think other people feel.

Example:

Statement: Work is a lot of fun.

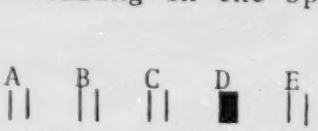
Possible answers:
A. Strongly disagree
B. Disagree
C. Indifferent or don't know
D. Agree
E. Strongly agree

Choose the answer that comes the closest to the way you feel about the statement and mark it on the separate answer sheet. If you "strongly disagree" that work is a lot of fun, you would mark A as the answer by filling in the space under A with the special pencil.

Example:

If you "agree" that work is a lot of fun, you would mark D as the answer by filling in the space under D with the special pencil.

Example:



Answer every statement. Work quickly. Do not worry or puzzle over individual items. It is your first impressions, the immediate "feelings" that we want. Read each statement carefully, then answer it quickly and go on to the next item immediately. If you have any questions, raise your hand.

DO NOT TURN THE PAGE UNTIL YOU ARE TOLD TO DO SO.

PART ONE

A. Strongly disagree
B. Disagree
C. Indifferent or don't know
D. Agree
E. Strongly agree

1. I would work after marriage to have the money to live in a better community.

2. Women who have jobs are <u>not</u> really happy.

3. Working with others would be an important part of a job for me.

4. A chance to work with ideas is the ideal kind of job.

5. A job should have good opportunities for promotion.

6. I would work after marriage to have money to buy basic things.

7. Woman's place is in the home.

8. Opportunities to be helpful to others in my work are important.

9. A job that gives you a chance to create something new is the best kind of job.

10. Good fringe benefits would be one thing to look for in a job.

11. I would work after marriage to have money to buy essentials.

12. Women are too independent today.

13. Being of help to people would interest me.

14. A chance to show inventiveness in meeting new problems is important.

15. A job should have opportunities for early promotion.

16. I would work after marriage to meet financial responsibilities.

17. Most women are <u>not</u> interested in chances to help others through a job.

18. Helping people who are less fortunate is important to me.

19. Women should make their own decisions.

20. Retirement benefits would have to be satisfactory in order for me to consider taking a job.

21. I would work after marriage to have money to buy a home.

22. Most men are not interested in chances to help women advance in a job.

23. Working closely with people would interest me.

24. The chance to supervise activities is an important part of a job.

25. Work seems important to the people who are doing it.

26. I would work after marriage to have money for daily expenses.

27. Women are trying to imitate men.

28. Opportunities to be useful to society through my work are important.

29. Having influence on groups is important to me.

30. Making money is the best thing about having a job.

31. Women may hold jobs after they are married to buy more things for home and family.

32. Parents should encourage the idea of marriage and home-making (rather than working) from childhood.

33. Working with people is preferable to working with things.

34. Married women should hold jobs so they can have a life of their own.

35. Status symbols (such as a personal office) make a job more attractive.

36. I would work in order to help put my children through college.

37. Most women dislike smart women.

38. A job gives you a good opportunity to meet people.

39. A chance for self-expression is a good reason for taking a job.

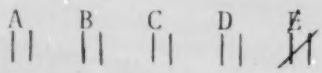
40. Opportunity for increasing salary is an important feature of a job.

PART TWO

DIRECTIONS:

There is one right answer for each question in Part Two. Choose one answer for each question and mark it on the answer sheet. Make sure that the number of the answer sheet is the same as the letter of the answer you choose. Answer every question.

Questions 41 to 65 have only four possible answers rather than the usual five. Use only the first four spaces on our answer sheet to answer these questions.



41. When one is thinking about the occupation she might enter as an adult, if her interests, abilities, and preferences did not limit her, approximately how many different jobs could she choose among?

    A. 300
    B. 3,000
    C. 30,000
    D. 300,000

42. The median salary income (half earned more, half earned less) of full-time male workers was $6,195 in 1964. What would you expect was the median income for female workers in that same year?

    A. $3,859
    B. $4,285
    C. $6,497
    D. $7,138

43. Approximately what percentage of all women are employed full time in the United States?

    A. 20%
    B. 35%
    C. 50%
    D. 65%

44. About how many women would you estimate are in the labor force?

A. 260,000
B. 2,600,000
C. 26,000,000
D. 260,000,000

45. Of the four groups below, indicate which educational group has the largest percentage of the women in that group employed full time.

A. less than high school education
B. high school graduate
C. college graduate
D. education beyond college

46. Look at the four age groups below and indicate which group has the largest percentage of women employed full time (both now and in projections for the 1970's).

A. 25-34 years old
B. 35-44 years old
C. 45-54 years old
D. 55-64 years old

47. What percentage of girls in your age bracket will probably be married by the time they are 19 years old?

A. 25%
B. 45%
C. 65%
D. 85%

48. Of those girls in the 18-19 year age bracket who are married, what percentage would you expect are also working?

A. 18%
B. 28%
C. 38%
D. 48%

49. What is the average number of years that a woman can expect to spend in the labor market?

A. 4-6 years
B. 8-10 years
C. 14-17 years
D. 20-25 years

50. Considering all the women who are working which of the following categories of educational achievement would account for over 40 percent of the total?

A. 8 years of school completed
B. 9-11 years of school completed
C. 12 years of school completed
D. 16 years of school completed

51. Among married women in the labor force, the age group represented in greatest number is:

A. 18-19
B. 20-24
C. 45-54
D. 55-64

52. Over 65 percent of the women employed in clerical positions have completed how many years of school?

A. 9-11 years of school
B. 12 years of school
C. 13-15 years of school
D. 16 years of school

53. Which of the following occupational areas has the greatest employment growth projection for the 1970's?

A. farm workers
B. sales workers
C. non-farm laborers
D. clerical workers

54. How many girls of today will work for money at some time during their lives?

A. about 1 of 3
B. about half
C. about 3 of 4
D. about 9 of 10

55. In 1964, the median yearly income of girls who dropped out of high school was $1,650. What would you expect to be the median yearly income for high school graduates?

A. $2,060
B. $2,400
C. $3,050
D. $4,500

56. In 1964, the median yearly income of girls who graduated from high school was $2,400. What would you expect to be the median yearly income for college graduates?

A. $3,000
B. $3,900
C. $4,400
D. $5,500

57. The average woman worker today is

A. single and 28 years old
B. single and 41 years old
C. married and 28 years old
D. married and 41 years old

58. More women are working today than ever before. Which of the following is (are) the reason(s)?

A. less time is needed for housekeeping
B. higher family costs for education, health, etc.
C. women are seeking the right to choose what they will do
D. all of the above

59. When do women make occupational decisions?

A. only in high school or college
B. when they take a job
C. when they have children
D. all of the above

60. Projected employment growth is more than average for which occupational groups?

A. professional and technical workers, service workers, and clerical workers
B. professional and technical workers, managers, and operatives
C. service workers, sales workers, skilled workers
D. clerical workers, sales workers, farm workers

61. In which three occupational groups did women represent over 50 percent of total employment in 1965?

A. professional and technical, clerical, sales
B. clerical, private-household workers, service workers
C. managers, operatives, and service workers
D. sales, services, craftsmen

62. Looking ahead to 1975 indicate about what percentage of women between 35 and 65 will be working or looking for work.

A. about 25%
B. nearly 50%
C. about 75%
D. nearly 90%

63. How many different types of jobs are you likely to have during your years of employment?

A. only one
B. three or four
C. eight or ten
D. dozens

64. When will your occupational education be finished?

A. when you graduate from high school
B. when you finish a vocational program
C. once you begin your first full-time employment
D. continuing education will be required to meet the challenge of change in the world of work

65. Worthwhile sources of occupational information include

A. school counselor
B. school and public libraries
C. friends and relatives
D. all of the above

DIRECTIONS:

Questions 66-80 have only two possible answers. Use only the first two spaces on your answer sheet to answer these questions.

In the following pairs, which occupation has the largest total number of people employed?

66. A. telephone operator
    B. airline hostess

67. A. physical therapist
    B. nurse

68. A. saleswoman
    B. fashion coordinator

In the following pairs of occupations, which requires the most education:

69. A. librarian
    B. surgeon

70. A. airline hostess
    B. dietitian

71. A. typist
    B. registered nurse

72. A. sales clerk
    B. laboratory technician

73. A. beauty operator
    B. high school counselor

DIRECTIONS:

The following questions can be answered with yes or no. If you decide the answer is "yes," mark "A" beside the item number on the answer sheet. If you decide the answer is "no," mark "B" beside the item number on the answer sheet. Be sure that the letter you mark is the same as the answer you chose. Answer every question. Use only the first two answer spaces on your answer sheet to answer these questions.

Remember - A. yes
B. no

74. The majority of women employed as professional workers have completed less than 12 years of school.

75. The majority of women employed as medical and other health workers have completed at or above 12 years of school.

76. Summer or part-time job experience is helpful in finding work later.

77. An individual needs to make an alternative vocational plan.

78. It is possible for a woman to successfully combine roles of wife, mother, and worker.

79. There are employment opportunities for women in jobs that are often considered men's work.

80. A study of occupational employment projections is a good way to get some idea of which occupations will offer the best job opportunities in the 1970's.

PART THREE

DIRECTIONS:

For statements 81-94, mark A if the statement applies to you. If it does not apply to you or if you don't know or aren't sure, mark B.

A. Yes, this statement applies to me.
B. No, this statement does not apply to me
(or) I'm not sure
(or) I don't know

Statistics show that 90-95 percent of all American women marry and that about one-third of married women are working. Assuming that you will marry some time, which pattern(s) would you plan to follow in your life?

81. I plan to marry right after high school.

82. I plan to work a couple of years after high school.

83. I have no plans to ever be employed.

84. I plan to marry while I'm still in college or some kind of occupational education.

85. I plan to marry right after college or other education beyond high school.

86. I plan to work a couple of years after college or other education beyond high school.

87. I plan to quit work when I marry.

88. I plan to continue working after I marry until we have our first baby.

89. I plan to return to work as soon as possible after my children are born.

90. I plan to work after all my children begin school.

91. I plan to work after all my children are in high school.

92. I plan to work when my children are grown up and on their own.

93. I definitely do not plan to marry.

94. I plan to work continuously after completing my education.

Pretest Field Study

_____
Name

DIRECTIONS:

Check or write in the correct answer for you. Be sure to put your name on this page and the next page.

95. Do you have plans for education following high school?

_____Yes _____No

If your answer is yes, please check the choice you have made.

_____junior college
_____four year college or university
_____business or commercial school
_____cosmetology (beauty) school
_____nursing school (2 or 3 year registered nurse program)
_____other (please specify_____)

96. What are your plans for working after you graduate from high school?

_____begin working immediately
_____begin working after further education or training
_____do not plan to work
_____undecided

97. What are your plans for marriage?

_____following high school graduation
_____following further education or training
_____after working at least two years
_____no plans for marriage
_____undecided

98. What job would you like to have when you first start working? (examples of jobs include: secretary, waitress, nurse)

_____
Name

99. How much do you think you will be able to earn when you get the job you chose in question 98?

_____$2,000 per year
_____$3,500 per year
_____$5,000 per year
_____$10,000 per year

100. How much education and/or training will you need to get the job you chose in question 98?

_____less than high school graduation
_____high school graduation
_____high school graduation plus some further education
_____four years of college
_____on-the-job training

101. How many children would you like to have?

102. Has your mother worked outside the home?

103. Is she working now?

104. What does (did) she do?

105. What is your father's occupation?

106. How many years of school did your father complete? (High school graduation would be equal to 12 years, college graduate would be equal to 16 years.)

107. How many years of school did your mother complete? (High school graduation would be equal to 12 years, college graduate would be equal to 16 years.)

108. Have you had a job?

109. What did you do?

Post-test Field Study

_____
Name

DIRECTIONS:

Check or write in the correct answer for you. Be sure to put your name on this page and the next page.

95. Do you have plans for education following high school?

_____Yes _____No

If your answer is yes, please check the choice you have made.

_____junior college
_____four year college or university
_____business or commercial school
_____cosmetology (beauty) school
_____nursing school (2 or 3 year registered nurse program)
_____other (please specify _____)

96. What are your plans for working after you graduate from high school?

_____begin working immediately
_____begin working after further education or training
_____do not plan to work
_____undecided

97. What are your plans for marriage?

_____following high school graduation
_____following further education or training
_____after working at least two years
_____no plans for marriage
_____undecided

98. What job would you like to have when you first start working? (examples of jobs include secretary, waitress, nurse)

_____
Name

99. How much do you think you will be able to earn when you get the job you chose in question 98?

_____$2,000 per year
_____$3,500 per year
_____$5,000 per year
_____$10,000 per year

100. How much education and/or training will you need to get the job you chose in question 98?

_____less than high school graduation
_____high school graduation
_____high school graduation plus some further education
_____four years of college
_____on-the-job training

101. How many children would you like to have?

102. Have you made any change in your plans since you started this unit of study?

103. Explain your answer to question 102 (If you have made changes in your plans, tell why. If you have not made changes in your plans, tell why not.)

Retest Field Study

_____
Name

DIRECTIONS:

Check or write in the correct answer for you. Be sure to put name on this page and the following pages.

95. Which of the following choices most closely describes your grades in all courses over the past two years?

_____mostly A's or equivalent
_____mostly A's and B's or equivalent
_____mostly B's and C's or equivalent
_____mostly C's and D's or equivalent
_____mostly D's and below or equivalent

96. Do you have plans for education following high school?

_____Yes _____No

If your answer is yes, please check the choice you have made.

_____junior college
_____four-year college or university
_____business or commercial school
_____cosmetology (beauty) school
_____nursing school (2 or 3 year registered nurse program)
_____other (Please specify_____)

97. What are your plans for working after you graduate from high school?

_____begin working immediately
_____begin working after further education or training
_____do not plan to work
_____undecided

98. What are your plans for marriage?

_____following high school graduation
_____following further education or training
_____after working at least two years
_____no plans for marriage
_____undecided

99. What job would you like to have when you first start working? (examples of jobs include: secretary, waitress, nurse)

_____
Name

100. How much do you think you will be able to earn when you get the job you chose in question 98?

_____$2,000 per year
_____$3,500 per year
_____$5,000 per year
_____$10,000 per year

101. How much education and/or training will you need to get the job you chose in question 98?

_____less than high school graduation
_____high school graduation
_____high school graduation plus some further education
_____four years of college
_____on-the-job training

102. How many children would you like to have?

103. Has your mother worked outside the home?

104. Is your mother working now?

105. What does (did) your mother do?

106. What is your father's occupation?

107. How many years of school did your father complete? (High school graduation would be equal to 12 years, college graduate would be equal to 16 years.)

108. How many years of school did your mother complete? (High school graduation would be equal to 12 years, college graduate would be equal to 16 years.)

109. If you have had a job for which you have been paid, what was it? (If you have never worked for pay, write "none.")

_____
Name

110. Have there been any changes in your plans for the future since this time last year?

_____Yes _____No

If you answered yes, please check one or more of the categories listed below to indicate the area(s) of change.

_____Change in educational plans
What was the change?

_____Change in occupational plans
What was the change?

_____Change in marriage and family plans
What was the change?

111. Who do you think influenced the changes in your plans?

_____there has been no change in my plans
_____teacher
_____counselor
_____parent or guardian
_____other relative
_____friend
_____other
(Please specify_____)

Appendix B

Table 4

Analyses of Variance: Pretest Scores (N=326)

Scale	Source of Variation	Sum of Squares	df	Mean Square	F
Knowledge of work					
	Experimental vs. Control	6.68	1	6.68	0.52
	Grade level	137.81	2	68.90	5.37**
	Interaction	4.36	2	2.18	0.17
	Error	4105.61	320	12.83	
Economic Mobility					
	Experimental vs. Control	15.87	1	15.87	0.69
	Grade level	83.74	2	41.87	1.81
	Interaction	101.42	2	50.71	2.19
	Error	7404.95	320	23.14	
Role Security					
	Experimental vs. Control	25.00	1	25.00	1.33
	Grade level	179.85	2	89.92	4.78**
	Interaction	22.02	2	11.01	0.58
	Error	6023.87	320	18.82	
Intrinsic Reward					
	Experimental vs. Control	6.62	1	6.62	0.50
	Grade level	24.95	2	12.48	0.95
	Interaction	87.38	2	43.69	3.32*
	Error	4204.87	320	13.14	
Challenge					
	Experimental vs. Control	5.65	1	5.65	0.38
	Grade level	2.12	2	1.06	0.07
	Interaction	34.40	2	17.20	1.16
	Error	4760.33	320	14.88	
Extrinsic Reward					
	Experimental vs. Control	4.18	1	4.18	0.26
	Grade level	15.05	2	7.53	0.47
	Interaction	12.04	2	6.02	0.37
	Error	5151.66	320	16.10	

Scale	Source of Variation	Sum of Squares	df	Mean Square	F
Choice of First Occupation (98)					
	Experimental vs. Control	0.92	1	0.92	0.37
	Grade level	5.41	2	2.70	1.10
	Interaction	11.03	2	5.52	2.25
	Error	785.03	320	2.45	
Plan to Never Work (83)					
	Experimental vs. Control	0.08	1	0.08	1.02
	Grade level	0.30	2	0.15	1.82
	Interaction	0.07	2	0.03	0.42
	Error	26.63	320	0.08	
Plan to Work After High School (82)					
	Experimental vs. Control	0.07	1	0.07	0.32
	Grade level	0.20	2	0.10	0.43
	Interaction	0.09	2	0.45	0.20
	Error	74.28	320	0.23	
Plan to Work After Completion of Education (86)					
	Experimental vs. Control	0.12	1	0.12	0.55
	Grade level	0.86	2	0.43	1.87
	Interaction	0.05	2	0.02	0.10
	Error	73.35	320	0.23	
Plan to Stop Working at Marriage (87)					
	Experimental vs. Control	0.22	1	0.22	1.71
	Grade level	0.57	2	0.28	2.16
	Interaction	0.24	2	0.12	0.92
	Error	42.01	320	0.13	
Plan to Stop Working When First Baby Arrives (88)					
	Experimental vs. Control	0.50	1	0.50	2.15
	Grade level	0.54	2	0.27	1.15
	Interaction	0.05	2	0.02	0.10
	Error	74.87	320	0.23	
Plan to Return to Work After Children are Born (89)					
	Experimental vs. Control	0.05	1	0.05	0.34
	Grade level	0.12	2	0.06	0.40
	Interaction	0.43	2	0.21	1.46
	Error	47.00	320	0.15	

Scale	Source of Variation	Sum of Squares	df	Mean Square	F
Plan to Work After Children Begin School (90)					
	Experimental vs. Control	0.00	1	0.00	0.00
	Grade level	0.11	2	0.06	0.23
	Interaction	0.79	2	0.40	1.67
	Error	75.97	320	0.24	
Plan to Work After Children are in High School (91)					
	Experimental vs. Control	0.83	1	0.83	3.52
	Grade level	0.32	2	0.16	0.67
	Interaction	0.29	2	0.14	0.61
	Error	75.70	320	0.24	
Plan to Work After Children are Grown (92)					
	Experimental vs. Control	0.05	1	0.52	0.21
	Grade level	0.39	2	0.19	0.78
	Interaction	0.14	2	0.07	0.28
	Error	79.77	320	0.25	
Plan to Work Continuously (94)					
	Experimental vs. Control	0.15	1	0.15	0.68
	Grade level	0.37	2	0.18	0.81
	Interaction	0.03	2	0.02	0.07
	Error	72.99	320	0.23	

* $p < .05$
** $p < .01$

Table 5
Analyses of Variance: Post-test Scores (N=326)

Scale	Source of Variation	Sum of Squares	df	Mean Square	F
Knowledge of Work Test					
	Experimental vs. Control	1279.48	1	1279.48	44.26**
	Grade Level	292.18	2	146.09	5.05**
	Interaction	97.95	2	48.97	1.69
	Error	9250.17	320	28.91	
Economic Mobility					
	Experimental vs. Control	314.25	1	314.25	11.83**
	Grade level	55.28	2	27.64	1.04
	Interaction	143.31	2	71.65	2.70
	Error	8499.80	320	26.56	
Role Security					
	Experimental vs. Control	0.54	1	0.54	0.02
	Grade level	169.22	2	84.61	3.70*
	Interaction	62.74	2	31.37	1.37
	Error	7326.13	320	22.89	
Intrinsic Reward					
	Experimental vs. Control	55.27	1	55.27	3.43
	Grade level	56.52	2	28.26	1.75
	Interaction	122.70	2	61.35	3.81*
	Error	5157.21	320	16.12	
Challenge					
	Experimental vs. Control	124.23	1	124.23	6.95**
	Grade level	4.90	2	2.45	0.14
	Interaction	39.42	2	19.71	1.10
	Error	5717.85	320	17.87	

Table 5 (cont.)

Scale	Source of Variation	Sum of Squares	df	Mean Square	F
Extrinsic Reward					
	Experimental vs. Control	34.46	1	34.46	1.80
	Grade level	1.79	2	0.90	0.05
	Interaction	15.51	2	7.75	0.40
	Error	6129.92	320	19.16	
Choice of First Occupation (98)					
	Experimental vs. Control	0.81	1	0.81	0.39
	Grade level	32.93	2	16.46	7.90**
	Interaction	35.21	2	17.60	8.45**
	Error	666.67	320	2.08	
Plan to Never Work (83)					
	Experimental vs. Control	0.00	1	0.00	0.03
	Grade level	0.03	2	0.01	0.20
	Interaction	0.32	2	0.16	2.21
	Error	23.43	320	0.07	
Plan to Work After High School (82)					
	Experimental vs. Control	0.10	1	0.10	0.42
	Grade level	0.76	2	0.38	1.66
	Interaction	0.07	2	0.03	0.15
	Error	73.25	320	0.23	
Plan to Work After Completion of Education (86)					
	Experimental vs. Control	0.06	1	0.06	0.24
	Grade Level	2.01	2	1.00	4.30
	Interaction	0.38	2	0.19	0.81
	Error	74.71	320	0.23	

Table 5 (cont.)

Scale	Source of Variation	Sum of Squares	df	Mean Square	F
Plan to Stop Working at Marriage (87)					
	Experimental vs. Control	0.43	1	0.43	2.88
	Grade Level	0.05	2	0.02	0.15
	Interaction	0.11	2	0.06	0.37
	Error	47.79	320	0.15	
Plan to Stop Working When First Baby Arrives (88)					
	Experimental vs. Control	0.64	1	0.64	3.05
	Grade level	1.57	2	0.79	3.77*
	Interaction	0.20	2	0.10	0.47
	Error	66.78	320	0.21	
Plan to Return to Work After Children are Born (89)					
	Experimental vs. Control	0.03	1	0.03	0.19
	Grade level	0.20	2	0.10	0.62
	Interaction	0.59	2	0.29	1.82
	Error	51.96	320	0.16	
Plan to Work After Children Begin School (90)					
	Experimental vs. Control	1.85	1	1.85	7.63**
	Grade level	0.43	2	0.21	0.88
	Interaction	2.10	2	1.05	4.34**
	Error	77.55	320	0.24	
Plan to Work After Children are in High School (91)					
	Experimental vs. Control	0.55	1	0.55	2.27
	Grade level	0.32	2	0.16	0.65
	Interaction	0.87	2	0.44	1.78
	Error	78.18	320	0.24	

Table 5 (cont.)

Scale	Source of Variation	Sum of Squares	df	Mean Square	F
Plan to Work After Children are Grown (92)					
	Experimental vs. Control	2.10	1	2.10	8.73**
	Grade level	0.94	2	0.47	1.97
	Interaction	0.85	2	0.43	1.78
	Error	76.83	320	0.24	
Plan to Work Continuously (94)					
	Experimental vs. Control	0.00	1	0.00	0.01
	Grade level	1.00	2	0.50	2.11
	Interaction	0.13	2	0.06	0.28
	Error	75.60	320	0.24	

*$p < .05$
**$p > .01$

Table 8

Analyses of Variance: Retest Scores (N=247)

Scale	Source of Variation	Sum of Squares	df	Mean Square	F
Knowledge of work					
	Experimental vs. Control	55.80	1	55.80	3.29
	Grade level	45.08	2	22.54	1.33
	Interaction	7.66	2	3.83	0.23
	Error	4093.31	241	16.98	
Economic Mobility					
	Experimental vs. Control	58.93	1	58.93	2.23
	Grade level	40.67	2	20.34	0.77
	Interaction	22.48	2	11.48	0.43
	Error	6363.38	241	26.40	
Role Security					
	Experimental vs. Control	40.87	1	40.87	1.68
	Grade level	64.20	2	32.10	1.32
	Interaction	34.65	2	17.33	0.71
	Error	5868.53	241	24.35	
Intrinsic Reward					
	Experimental vs. Control	27.75	1	27.75	1.49
	Grade level	22.16	2	11.08	0.59
	Interaction	89.96	2	44.98	2.41
	Error	4493.18	241	18.64	
Challenge					
	Experimental vs. Control	78.60	1	78.60	4.23*
	Grade level	52.99	2	26.49	1.43
	Interaction	57.03	2	28.52	1.54
	Error	4473.67	241	18.56	

Table 8 (cont.)

Scale	Source of Variation	Sum of Squares	df	Mean Square	F
Extrinsic Reward					
	Experimental vs. Control	0.21	1	0.21	0.01
	Grade level	150.31	2	75.61	3.91*
	Interaction	96.64	2	48.32	2.52
	Error	4627.16	241	19.20	
Choice of First Occupation (98)					
	Experimental vs. Control	0.06	1	0.06	0.06
	Grade level	6.42	2	3.21	3.62*
	Interaction	7.49	2	3.74	4.22*
	Error	213.18	241	0.88	
Plan to Never Work (83)					
	Experimental vs. Control	0.02	1	0.02	0.46
	Grade level	0.49	2	0.24	0.62
	Interaction	0.03	2	0.01	1.24
	Error	9.47	241	0.04	
Plan to Work After High School (82)					
	Experimental vs. Control	0.01	1	0.01	0.05
	Grade level	2.79	2	1.40	7.17**
	Interaction	0.11	2	0.05	0.27
	Error	49.97	241	0.19	
Plan to Work After Completion of Education (86)					
	Experimental vs. Control	0.01	1	0.01	0.05
	Grade level	2.79	2	1.40	7.17**
	Interaction	0.11	2	0.05	0.27
	Error	46.97	241	0.19	

Table 8 (cont.)

Scale	Source of Variation	Sum of Squares	df	Mean Square	F
Plan to Stop Working at Marriage (87)					
	Experimental vs. Control	0.05	1	0.05	0.55
	Grade level	0.14	2	0.07	0.74
	Interaction	0.01	2	0.01	0.04
	Error	22.27	241	0.09	
Plan to Stop Working When First Baby Arrives (88)					
	Experimental vs. Control	0.02	1	0.02	0.11
	Grade level	1.59	2	0.79	3.83
	Interaction	0.34	2	0.17	0.83
	Error	49.90	241	0.21	
Plan to Return to Work After Children are Born (89)					
	Experimental vs. Control	0.58	1	0.58	3.90*
	Grade level	0.03	2	0.01	0.09
	Interaction	0.41	2	0.20	1.36
	Error	36.00	241	0.15	
Plan to Work After Children Begin School (90)					
	Experimental vs. Control	2.48	1	2.48	10.43**
	Grade level	0.03	2	0.02	0.07
	Interaction	2.94	2	1.47	6.18*
	Error	57.26	241	0.24	
Plan to Work After Children are in High School (91)					
	Experimental vs. Control	1.62	1	1.62	7.06**
	Grade level	0.07	2	0.04	0.16
	Interaction	3.65	2	1.82	7.97**
	Error	55.12	241	0.23	

Table 8 (cont.)

Scale	Source of Variation	Sum of Squares	df	Mean Square	F
Plan to Work After Children are Grown (92)					
	Experimental vs. Control	1.18	1	1.18	4.87*
	Grade level	0.31	2	0.15	0.63
	Interaction	0.91	2	0.45	1.88
	Error	58.15	241	0.24	
Plan to Work Continuously (94)					
	Experimental vs. Control	0.37	1	0.37	1.77
	Grade level	0.19	2	0.09	0.45
	Interaction	0.55	2	0.28	1.32
	Error	50.72	241	0.21	

*$p < .05$
**$p < .01$

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